<Case Report>Two Cases of Appendicitis in Kawasaki Disease

AUTHOR(S):

CHIBA, TSUNEO

CITATION:

CHIBA, TSUNEO. <Case Report>Two Cases of Appendicitis in Kawasaki Disease. 日本外科宝函 1998, 67(3-4): 69-71

ISSUE DATE:

1998-12-01

URL:

http://hdl.handle.net/2433/202851

Arch Jpn Chir 67(3・4), 69～71, Dez., 1998

症　　例

Two Cases of Appendicitis in Kawasaki Disease

Tsuneo Chiba

Department of Pediatric Surgery, Sendai National Hospital

Received for Publication, June. 11., 1998

Abstract

Two cases of appendicitis in Kawasaki disease (KD) are presented. Appendicitis in KD is very rare condition, and only a few cases have been previously reported. This report suggests the need to expand the differential diagnosis of abdominal pain in this group of patients.

Introduction

Kawasaki disease (KD) is a disease of unknown etiology that affects children before 5 years of age. The basic manifestation of this disease are appeared in the skin, mucous membrane and coronary artery. Mesenteric adenitis, intestinal stricture, intestinal pseudo-obstruction and hydrops of the gallbladder are known abdominal complications of KD. These conditions are usually improve by ordinary drug administration for KD. However, it sometimes needs surgical management. We herein report two cases of acute appendicitis in this disease.

Case Reports

Case 1. A 6-year-old boy was examined in a local pediatrician's clinic with a 4-day history of lower quadrant abdominal pain, nausea, vomiting and fever of 38°C. Laboratory data showed the white blood cells of 21,300 /mm^3, C-reactive protein (CRP) of 11.0 mg/dl. The condition was preceeded few days earlier by general maculopapular rash especially in the abdomen. The child was referred to our department for surgical intervention of acute appendicitis. Re-evaluation revealed lower quadrant tenderness, rebound tenderness and cecal ileus by plain abdominal x-ray. Family history revealed a 2 years younger brother diagnosed as KD one year earlier. Acute appendicitis associated with KD is mostly suspected by these findings. At operation acute phlegmonous appendicitis was confirmed and conventional appendectomy was performed. Fever was down for one day postoperatively, then up again with increasing maculopapular rash, conjunctival ecchymosis, swel-

Present address: Department of Pediatric Surgery, Sendai National Hospital, 2-8-8 Miyagino, Miyagino-ku, Sendai 983-8520, JAPAN

索引用語：川崎病，急性虫垂炎，腹痛
Key words: Kawasaki disease, Acute appendicitis, Abdominal pain

ling of the lips and maceration and peeling of the skin of the feet and scrotum. Cardiac echo showed normal findings. Still fever persisted with inguinal lymphadenopathy and increasing ESR, gamma-globulin was administered for 2 days with good response and lysis of fever. The patient was discharged on the 25th postoperative day.

Case 2. A 4-year-6-mo-old boy was transferred to our hospital with a 3-day history of fever of 38°C and severe colicky abdominal pain in the right lower quadrant. Laboratory data showed the white blood cells of 12,600 /mm^3, CRP of 7.0 mg/dl. The results of other laboratory tests were normal. A diagnosis of appendicitis was made by physical and ultrasonic examinations. During surgery, an enlarged, firm, inflamed appendix was noted. Histological examination showed moderatory inflammatory changed with edema. Abdominal pain was totally disappeared after the operation. However, a maculopapular rash of the trunk, conjunctivitis, cervical adenopathy, desquamation of hand was noticed two days after the operation. A daignosis of KD was made and the patient was started on gamma-globulin injection. All symptomes were disappeared 18 days after the administration.

Comments

Kawasaki disease (KD) is an acute febrile illness of infants and children characterized by high fever for at least 5 days, with cervical lymphadenopathy, conjunctivitis, inflammatory changes of the lips and oral cavity, a maculopapular rash and desquamation of the hands and feet[1,2]. The most serious manifestations of KD are cardiac, including coronary arteries, myocarditis and coronary insufficiency. Gastrointestinal complications also includes, such as small bowel pseudo-obstruction, intestinal strictures and hydrops of the gall-bladder[3,4,5]. However, it sometimes needs surgical treatment. Cases of intussusception[6], appendicitis[7], peritonitis due to intestinal perforation[8], volvulus of the intestine[9] in KD have been reported. Systemic vasculitis is a significant component of the pathophysiology of KD. Intestinal stricture, hemorrhage, and intestinal pseudo-obstruction due to the vasculitis are previously reported[3,4,10]. Therefore, it is important to examine the presence of vasculitis pathologically.

Appendicitis is the most common illness of acute abdomen in children. It may be either obstructive most probably due to fecolith or non-obstructive by blood born infection. In case 1, totally phlegmonous changes of the wall of the appendix without fecolith was observed, and blood born infection was suspected. In case 2, inflammatory changes of the wall with vascular hyperemia was seen. It would speculate that vasculitis may play a role in the pathogens of appendicitis in these cases.

Abdominal pain in a child with KD may confuse the pediatric surgeon and put us a diagnostic dilenma. Therefore, careful examination should be taken for accurate diagnosis.

Conclusion

Two cases of appendicitis in KD was reported. Appendicitis is a rare complication of this disease. However, appendicitis in KD could be added to other causes of acute abdomen of children.

References

1) Kawasaki T, Kosaki F, Okawa S, et al: A new infantile acute febrile mucocutaneous lymph node syndrome

(MCLNS) prevailing in Japan. Pediatrics 54: 271–276, 1978.
2) Rauch AM, and Hurwitz ES: Centers for Disease Control (CDC) case definition of Kawasaki's syndrome. Pediatr Infect Dis J 4: 702–703, 1985.
3) Murphy DJ, Morrow WR, Harberg FJ, et al: Small bowel obstruction as a complication of Kawasaki disease. Clin Pediatr 26: 193–197, 1987.
4) Miyake T, Kawamori J, Yoshida T, et al: Small bowel pseudo-obstruction in Kawasaki disease. Pediatr Radiol 17: 383–386, 1987.
5) Sonobe T: Kawasaki disease (Jpn). Jap J Pediatr 29 (suppl): 1155–1160, 1997.
6) Caty MG, Stylianos S and Lillehei CW: Ileocolic intussusception in Kawasaki's disease. Pediatr Surg Int: 9, 590–591, 1994.
7) Goto Y, Furuhata H: Recurrent Kawasaki disease in older child following appendicitis (Jpn). J Pediatr Practice 56: 509–512, 1993.
8) Wakasugi H, Ishitoya N, Ikegami M, et al: A case of aplastic crisis and intestinal perforation in Kawasaki disease. J Pediatr Practice 51: 290–294, 1988.
9) Seguchi M, Kawai S, Hotta T, et al: A case of MCLS associated with volvulus of the small intestine (Jpn). J Pediatr Practice 43: 599–602, 1980.
10) Huang YC, Ho FY, Huang FY, et al: Kawasaki disease complicated with hemorrhagic enteritis mimicking intestinal obstruction: report of one case. Acta Paediatr Sin 31: 53–57, 1990.

和文抄録

虫垂炎をきたした川崎病の2例

国立仙台病院　小児外科
千葉　庸夫

川崎病では腹部症状として腹痛がみられることは知られているが時には手術が必要な合併症がみられることがある．われわれは虫垂炎の発生がみられた川崎病を2例経験したので報告する．

【症例1】6歳，男児．腹痛，嘔吐，発熱がみられ，回盲部に筋性防御反応を触知し，白血球数 21300/mm³, CRP 11.0 mg/dl と炎症所見を示した．本例の弟に川崎病の既往があり本症を疑ったが手術が必要と判断し，手術を施行，化膿性虫垂炎であることを確認した．糞石はみられず血管性の閉塞が示唆された．

【症例2】4歳，6ヶ月男児で同様に腹痛，発熱を主訴とし，手術により虫垂炎と診断したがこれら2例とも術後になって川崎病特有の症状が出現した．主体は血管炎と思われ，腹痛を伴った川崎病の場合には虫垂炎が合併症としてみられる可能性があり，注意が必要である．